

# Comparisons of Job Characteristics

Focus Occupation: **Biological Technicians (19-4021)**

Associated Occupation: **Environmental Engineering Technicians (17-3025)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 25

Focus Occupation: **Biological Technicians (19-4021)**

Associated Occupation: **Environmental Engineering Technicians (17-3025)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	15.8	5.7	<<	Extensive education and/or training may be required
Design	5.2	11.1	2.9	<<	Extensive education and/or training may be required
Building and Construction	4.0	10.6	1.8	<<	Extensive education and/or training may be required
Physics	4.3	10.2	4.3	<<	Extensive education and/or training may be required
Law and Government	5.9	9.5	3.7	<<	Extensive education and/or training may be required
Biology	3.7	6.8	18.9	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: **Biological Technicians (19-4021)**

Associated Occupation: **Environmental Engineering Technicians (17-3025)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	16.3	14.1	<	A higher skill level may be required
Critical Thinking	10.8	14.5	12.3	<	A higher skill level may be required
Active Learning	8.7	12.6	10.1	<	A higher skill level may be required
Mathematics	6.2	11.3	9.4	<	A higher skill level may be required
Quality Control Analysis	5.9	9.7	7.9	<	A higher skill level may be required

Management of Material Resources	3.7	6.8	4.6	<<	Extensive development of skills in this area may be required
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities	Similarity of Focus Occupation to Associated Occupation: 90
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**Focus Occupation: Biological Technicians (19-4021)**  
**Associated Occupation: Environmental Engineering Technicians (17-3025)**

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	16.6	11.8	<<	Extensive improvement in abilities may be required
Problem Sensitivity	11.1	15.9	11.3	<<	Extensive improvement in abilities may be required
Near Vision	11.1	14.7	13.9	0	Current ability level may be sufficient
Deductive Reasoning	10.6	14.5	11.7	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	13.6	12.6	0	Current ability level may be sufficient
Information Ordering	9.9	13.3	12.3	0	Current ability level may be sufficient
Category Flexibility	9.0	11.8	11.5	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	10.6	10.1	0	Current ability level may be sufficient
Number Facility	6.3	10.6	8.7	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: 77
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**Focus Occupation: Biological Technicians (19-4021)**  
**Associated Occupation: Environmental Engineering Technicians (17-3025)**

Work Activities	Exclusivity of Activity
Analyze scientific research data or investigative findings	27
Collect samples for testing	58
Communicate technical information	4
Create mathematical or statistical diagrams or charts	43
Explain complex mathematical information	30
Follow safe waste disposal procedures	50
Maintain records, reports, or files	5
Prepare technical reports or related documentation	22
Record test results, test procedures, or inspection data	48
Use chemical testing or analysis procedures	54
Use hazardous materials information	35

Use knowledge of metric system	39
Use laboratory equipment	60
Use precision measuring tools or equipment	17
Use scientific research methodology	21

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 81

**Focus Occupation: Biological Technicians (19-4021)**

**Associated Occupation: Environmental Engineering Technicians (17-3025)**

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Clinical and diagnostic analyzers and accessories and supplies	18
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory blending and dispersing and homogenizing equipment and supplies	27
Laboratory centrifuges and accessories	13
Laboratory cooling equipment	25
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory water purification equipment and supplies	29
Pipettes and liquid handling equipment and supplies	16
Presterilization cleaning equipment and solutions	24
Respiratory protection	6

Spectroscopic equipment	10
Test Tubes	26
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.